
Energy Conservation in Ontario: An Update and Look Forward

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GTHA Collaboration Group Bi-Annual Event

Energy Conservation in Ontario

1. Update: Conservation and Energy Efficiency Achievements
2. A Look Forward: 2017 Long-Term Energy Plan; Mid-Term Reviews and New Conservation Initiatives
3. Collaboration for a Customer-Centric Approach
4. Opportunities to Provide Your Feedback

1. Update: Conservation and Energy Efficiency Achievements

Ontario's Energy Sector



- Policy direction and targets
- Codes, Standards and Legislation
- Leadership through programs & initiatives



- Independent regulator of Ontario's electricity and natural gas sectors
- Oversees natural gas Demand Side Management Framework, LDC rate applications



- Balancing the supply, demand and flow of electricity
- Planning for the province's energy needs
- Overseeing Conservation and Demand Management Framework

Local Distribution Companies (LDCs)/Gas Utilities

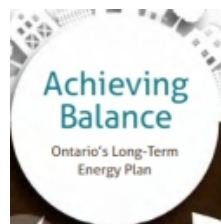
- The “face” of the sector
- Delivering energy to customers
- Developing and delivering conservation programs to customers



Other Ministries:

- Ministry of Municipal Affairs – Ontario Building Code
- Ministry of the Environment and Climate Change – Climate Change Action Plan

Key Achievements Since 2013 LTEP



LTEP 2013
Released
Dec. 2013



Six-Year Conservation First Framework takes effect
Jan. 2015



HOME ENERGY CONSERVATION INCENTIVE PROGRAM
With funding from Ontario's Green Investment Fund

Home Energy Conservation Incentive Program launched with funding from the Green Investment Fund
Oct. 2016 (*Whole Home pilot builds on program May 2017*)



Regulation enacted for mandatory **Energy and Water Reporting and Benchmarking** for large buildings
Feb. 2017



Ontario Fair Hydro Plan released
March 2017

2014

2015

2016

2017

Five Amendments to Ontario's **Energy Efficiency Regulation** further advance efficiency standards:
Jan. 2014, Mar. 2014, Jan. 2015, Jan 2016 & Jan. 2017

Six-Year Demand Side Management Framework takes effect
Jan. 2015



IESO implements annual **Demand Response Auction** process.
Dec. 2015 (first auction)

Multi-site P4P Program launched by the IESO
Dec. 2016

Green Ontario Fund and GreenON web site launched August 2017



Conservation and Energy Efficiency Success

Between 2006 and 2015, conservation programs and codes and standards delivered:

- **13.53 TWh** of electricity savings in 2015
 - **4,439 MW** of electricity peak reductions in 2015
 - **1,700 million cubic meters** of natural gas from DSM programs alone
- Conservation continues to be the most **cost-effective approach** to meeting our energy needs.

Comparing the Cost of Electricity Conservation (\$/MWh)

Electricity Conservation	\$30-50
Solar PV	\$140-290
Wind	\$65-210
Waterpower	\$120-240
Nuclear	\$120-290
Natural Gas	\$80-310

Source: IESO, "Ontario Planning Outlook," September 2016

*"In 2014, the net cost to ratepayers was **2.5 cents per cubic metre of [natural] gas saved** versus an average residential natural gas price of 18.3 cents per cubic metre."*

-Environmental Commissioner of Ontario, Annual Energy Conservation Progress Report 2015/16

Recent Ministerial Directions

June 10, 2016:

- Multi-distributor Pay-for-Performance program, launched in December 2016
- Whole Home Pilot, launched in May 2017

December 16, 2016:

- Availability of province-wide programs for customers

August 4, 2017:

- IESO support for GreenON programs
- Availability of low-income conservation programs



Energy Performance Program Incentives for Multi-Site Businesses



The energy performance program (EPP) encourages whole building energy performance improvements through incentives at a four cent per kilowatt-hour (\$0.04/kWh) of savings per year for up to 4 years. This pay-for-performance model encourages participants who are able to make behavioural and operational changes alongside capital investment projects to achieve and grow energy savings over multiple years.

Green Ontario Fund and the Role of the IESO



Search for

Save Money, Fight Climate Change

Take advantage of Ontario programs and rebates to reduce your energy costs and fight climate change.

- **June 2016:** 2016-2020 Climate Change Action Plan (CCAP) released.
- **August 2017 Direction** enables the IESO to enter into agreements with MOECC or the Green Ontario Fund to support GreenON program delivery.
- **August 30, 2017:** Launch of Green Ontario Fund, website [GreenON.ca](https://www.greenon.ca), and GreenON Installations program.
 - A coordinated, one-window approach to programs will expand customer offerings and help achieve energy savings and GHG emissions targets.

2. A Look Forward: 2017 Long-Term Energy Plan, Mid-Term Reviews and New Conservation Initiatives

What We Heard from 2017 LTEP Consultations

- The LTEP engagement process took place from October 2016 to January 2017.
- What we heard:
 - Costs for residents and businesses are too high and energy prices are affecting Ontario's industrial competitiveness
 - Prepare for impacts of distributed generation, consider capacity markets for supply decisions, and be technology neutral
 - Continue and enhance existing conservation programs, support community based energy planning, allow in front of the meter conservation, and align with CCAP
 - Consider new opportunities and business models for utilities, change rate design to allow for smart grid projects
- The Ministry of Energy expects to release the 2017 LTEP this fall.



Technical Reports Sept 2016

- 1) Ontario Planning Outlook (IESO)
- 2) Fuels Technical Report (Navigant)



Engagement Oct'16 – Jan'17

- Stakeholder sessions and
Public Open Houses
- Indigenous sessions

Multi-faceted engagement



Development 2017

- 1) Release LTEP
- 2) Implementation Directives to IESO and OEB



Implementation 2018-2020

- 1) IESO and OEB Implementation Plans
- 2) Ministry of Energy initiatives

Mid-Term Reviews of the Frameworks

- 2015-2020 electricity and natural gas conservation frameworks are aligned to enable greater collaboration among electricity and natural gas utilities.
- **Mid-Term Review of the electricity Conservation First Framework (CFF) and Industrial Accelerator Program:**
 - Overall and electricity distributor budgets and targets
 - How programs are meeting customer needs, and
 - Alignment with climate change objectives.
- **Mid-Term Review of the natural gas DSM Framework:**
 - Natural gas utility budgets and targets
 - How programs are meeting customer needs, and
 - Interactions with Ontario's cap and trade program.
- Mid-Term Reviews are in process. To be completed in June (CFF) and December 2018 (DSM).

New Conservation Initiatives



On February 6, 2017, Ontario introduced **mandatory energy and water reporting** for large buildings.

Under the initiative, building owners of commercial, industrial, multi-unit residential and other building types that are 50,000 square feet or larger are required to report their energy and water consumption, and greenhouse gas emission data annually to the Ministry of Energy, starting July 1, 2018.



Green Button is a data standard that can empower households and businesses with access to data on their energy and water use and allow them to securely share their data from their utility with apps of their choice in an electronic, standardized and secure way.

The Ministry of Energy is developing a proposal for implementing Green Button province-wide.



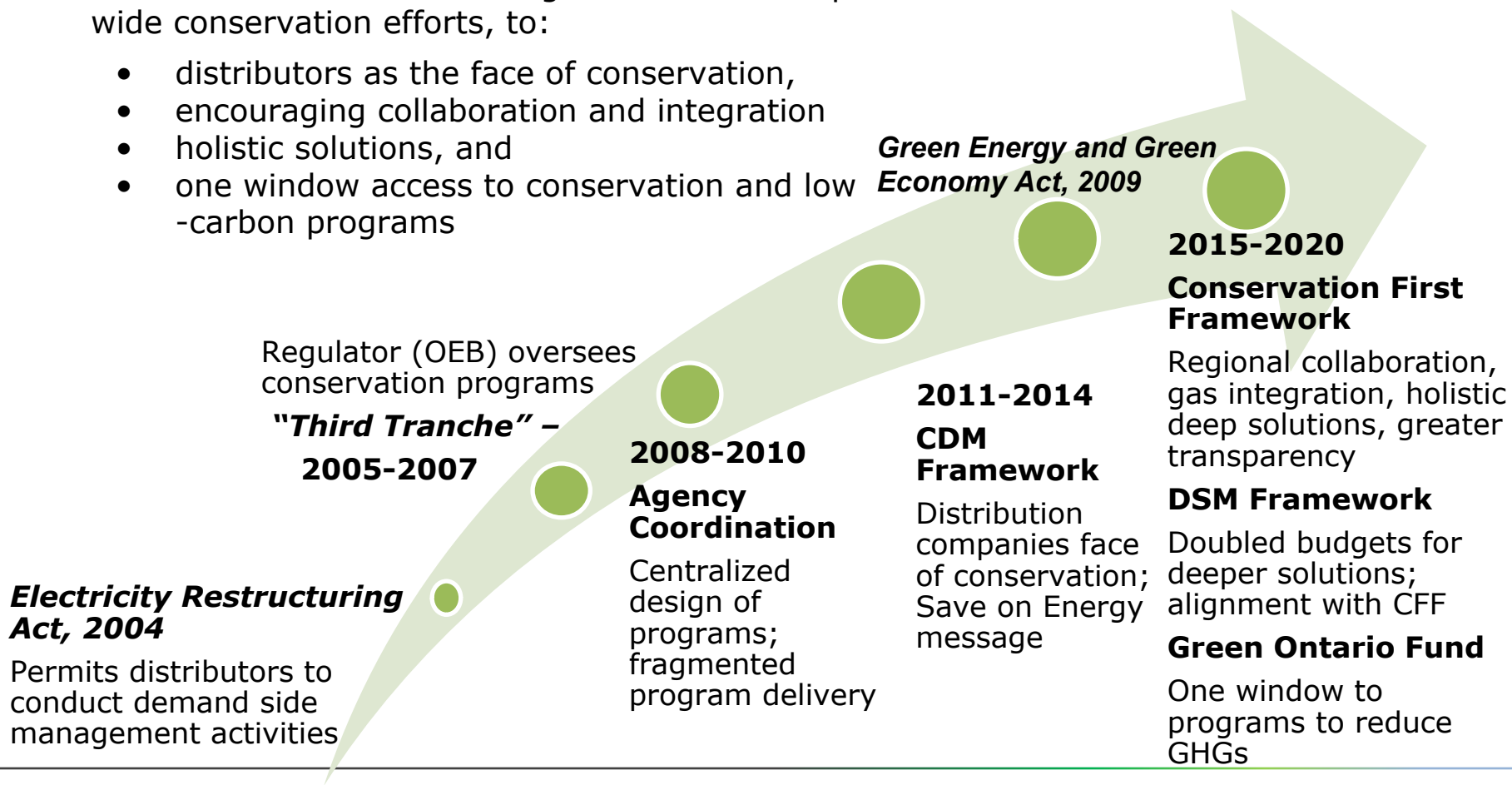
In Front of the Meter Conservation technologies are deployed on the distribution system and can provide cost-effective electricity savings and/or peak reductions for customers behind-the-meter.

The Ministry of Energy is developing a proposal to help remove barriers to IFMC deployment in Ontario.

3. Collaboration for a Customer-Centric Approach

Collaboration is Key to Continued Conservation Achievements

- Ontario has built up significant program delivery capacity and a culture of conservation in the province.
- We have moved from building a foundation for province-wide conservation efforts, to:
 - distributors as the face of conservation,
 - encouraging collaboration and integration
 - holistic solutions, and
 - one window access to conservation and low-carbon programs



Benefits and Examples of Collaboration

- Benefits of collaboration
 - Cost efficiencies
 - Economies of scale
 - Improved customer experience
 - Capacity building
 - Innovation
- Under the CFF, an LDC Collaboration Fund is in place which has funded projects like:
 - Energy Into Action LDC and natural gas customer event
 - Regional energy managers
 - Shared refrigeration specialists for the new Small Business Refrigeration Program
- Currently, 46 electricity distributors are involved in joint conservation plans, and electricity distributors are partnering with natural gas distributors to design and develop programs that cover multiple fuels.



4. Opportunities to Provide Your Feedback

Opportunities to Provide Your Feedback

- There are ongoing opportunities for industry and stakeholders to provide feedback and perspectives, including through:
 - IESO-led CFF mid-term review
 - <http://www.ieso.ca/sector-participants/engagement-initiatives/engagements/conservation-framework-mid-term-review>
 - OEB-led DSM mid-term review
 - <https://www.oeb.ca/industry/policy-initiatives-and-consultations/natural-gas-demand-side-management-dsm>
 - More details coming soon
 - Future implementation related to the 2017 LTEP
 - Stakeholder engagements on new program development

Thank you, and Questions?

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